

In the Claims:

Amend the claims as follows:

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1. (Currently amended) A method for secure forwarding of a message from a first computer to a second computer via an intermediate computer in a telecommunication network, comprising:

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the first computer and the second computer negotiating and exchanging keys with one another according to a key exchange protocol to establish a secure connection between the first computer and the second computer via the intermediate computer, the secure connection having a source address of the first computer as a first end point and a destination address of the second computer as a second end point of the secure connection,

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in the first computer, forming a secure message by giving the secure message a first unique identity and a first destination address to the intermediate computer, sending the secure message containing the first unique identity and the first destination address from the first computer to the intermediate computer,

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the intermediate computer receiving the secure message and performing a translation by using the first unique identity to find a second destination address to the second computer, the intermediate computer substituting the first destination address with the second destination address to the second computer,

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the intermediate computer substituting the first unique identity with a second unique identity of the secure connection, and

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the intermediate computer forwarding the secure message with the second destination address and the second unique identity to the second computer in the secure connection.

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2. (Previously presented) The method of claim 1 wherein the method further comprises forming the secure message by using an IPSec connection between the first computer and the second  
5 computer.

3. (Previously presented) The method of claim 1 wherein the method further comprises performing a secure forwarding of the message by making use of SSL or TLS protocols.  
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4. (Previously presented) The method of claim 2 wherein the method further comprises manually performing a preceding distribution of keys to components for forming the IPSec connection.  
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5. (Previously presented) The method of claim 2 wherein the method further comprises performing a preceding distribution of keys for forming the IPSec connection by an automated key exchange protocol.  
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6. (Previously presented) The method of claim 5 wherein the method further comprises performing the automated key exchange protocol used for the preceding distribution of keys for forming the IP Sec connection by means of a modified IKE key exchange protocol between the first computer and the  
25 intermediate computer and by means of a standard IKE key exchange protocol between the intermediate computer and the second computer.

7. (Previously presented) The method of claim 2 wherein the method further comprises sending the message that is sent from the first computer as a packet that contains message data, an inner IP header containing the actual sender and receiver addresses, an outer IP header containing the addresses of the  
30 first computer and the intermediate computer, the unique  
35

identity.

8. (Previously presented) The method of claim 1 wherein the  
method further comprises the IPSec connection being one or  
5 more security associations (SA) and the unique identity being  
one or more SPI values.

9. (Previously presented) The method of claim 1 wherein the  
method further comprises performing the matching by using a  
10 translation table stored at the intermediate computer.

10. (Previously presented) The method of claim 1 wherein the  
method further comprises changing both the address and the  
SPI-value by the intermediate computer.

15 11. (Previously presented) The method of claim 1 wherein the  
method further comprises the first computer being a mobile  
terminal so that the mobility is enabled by modifying the  
translation table at the intermediate computer.

20 12. (Previously presented) The method of claim 11 wherein the  
method further comprises performing the modification of the  
translation tables by sending a request for registration of  
the new address from the first computer to the intermediate  
25 computer.

13. (Previously presented) The method of claim 12 wherein the  
method further comprises sending a reply to the request for  
registration from the intermediate computer to the first  
30 computer.

14. (Previously presented) The method of claim 12 wherein the  
method further comprises authenticating or encrypting by IPSec  
the request for registration and/or reply.

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15. (Previously presented) The method of claim 4 wherein the method further comprises establishing the key distribution for the secure connections by establishing an IKE protocol translation table, and using the translation table to modify  
5 IP addresses and cookie values of IKE packets in the intermediate computer.

16. (Previously presented) The method of claim 15 wherein the method further comprises establishing the key exchange  
10 distribution by:  
generating an initiator cookie and sending a zero responder cookie to the second computer,  
generating a responder cookie in the second computer,  
establishing a mapping between IP addresses and IKE cookie  
15 values in the intermediate computer, and  
using the translation table to modify IKE packets in flight by modifying the external IP addresses and possibly IKE cookies of the IKE packets.

20 17. (Previously presented) The method of claim 15 wherein the method further comprises modifying a modified IKE protocol between the first computer and the intermediate computer by transmitting the IKE keys from the first computer to the intermediate computer in order to decrypt and modify IKE  
25 packets.

18. (Previously presented) The method of claim 15 wherein the method further comprises carrying out in a modified IKE  
30 protocol between the first computer and the intermediate computer the modification of the IKE packets by the first computer with the intermediate computer requesting such modifications.

19. (Previously presented) The method of claim 17 wherein the  
35 method further comprises defining the address so that the

first computer is identified for the second computer by the intermediate computer by means of an IP address taken from a pool of user IP addresses when forming the translation table.

5 20. (Previously presented) The method of claim 1 wherein the method further comprises sending the secure message by using an IPSec transport mode.

10 21. (Previously presented) The method of claim 1 wherein the method further comprises sending the secure message by using an IPSec tunnel mode.

22. (Currently amended) A telecommunication network for secure forwarding of messages, comprising:  
15 a first computer, a second computer and an intermediate computer,  
means for directly negotiating and exchanging keys, according to a key exchange protocol, between the first computer and the second computer to establish a security association having a  
20 source address of the first computer as a first end point and an IP destination address of the second computer as a second end point,  
the first and the second computers having means for performing an IPSec processing,  
25 the intermediate computer having translation means for using translation tables to perform IPsec ~~IPSec~~ and IKE translation and for changing a destination address of the intermediate computer of a secure message, containing a unique identity, to a destination address of the second computer without  
30 decrypting the secure message, and  
the intermediate computer having means for using the unique identity when forwarding the secure message received from the first computer to the second computer in the security association.

23. (Previously presented) The telecommunication network of claim 22 wherein the translation table for IPSec translation has IP addresses of the intermediate computer to be matched with IP addresses of the second computer.

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24. (Previously presented) The telecommunication network of claim 22 wherein the translation tables for IKE translation consists of two partitions, one for the communication between the first computer and the intermediate computer and another  
10 for the communication between the intermediate computer and the second computer.

25. (Previously presented) The telecommunication network of claim 24 wherein both partitions of the mapping table for IKE  
15 translation contains translation fields for a source IP address, a destination IP address, initiator and responder cookies between respective computers.

26. (Previously presented) The telecommunication network of claim 22 wherein there is another translation table for IKE  
20 translation containing fields for matching a given user to a given computer.

27. (Currently amended) A telecommunication network for secure  
25 forwarding of messages, comprising:  
a first computer,  
a second computer,  
an intermediate computer electronically connected to the first computer and the second computer,  
30 a negotiating and key exchanging module between the first computer and the second computer to establish a secure connection having a source address of the first computer as a first end point and a destination address of the second computer as a second end point, and  
35 the intermediate computer performing translation between

destination addresses and secure identities for forwarding  
~~secure messages~~ a secure message, containing a unique  
identity, received from the first computer and using the  
unique identity when forwarding the secure message to the  
5 second computer in the secure connection without decrypting  
the secure message and being aware of the keys to encrypt  
and/or authenticate the secure message and without  
establishing a new secure connection.

10 28. (New) The method of claim 1 wherein the method further  
comprises the intermediate computer substituting the first  
unique identity with the second unique identity of the secure  
connection without establishing a new secure connection and  
without involving the second computer.

15 29. (New) The method of claim 1 wherein the packets between  
the first computer and intermediate computers are sent using a  
UDP protocol.